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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

MEHTA, ASHWIN D

ART UNIT

PAPER NUMBER

1638

DATE MAILED: 09/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/771,938

Applicant(s)

CARLSON, THOMAS B.

Examiner

Ashwin Mehta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Specification

1. The specification is objected to for the presence of blank lines on page 5, line 13, page 22, lines 17-18, and page 29, lines 10 and 11.

Claim Objections

2. Claims 1, 2, 5, 14, 15, 17, 20, 21, 22, and 31 are objected to for the presence of a blank line.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation "I015036" in claims 1, 2, 5, 14, 15, 17, 20, 21, 22, and 31 render the claims and those dependent thereon indefinite. Since the name "I015036" is not known in the art, the use of said name does not carry art-recognized limitations as to the specific or essential characteristics that are associated with that denomination. The name "I015036" does not clearly identify the claimed seeds, plants, and plant parts, and does not set forth the metes and bounds of the claimed invention. The name appears to have been arbitrarily assigned and can be changed.

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The specific characteristics associated therewith can also be modified. Amending the claims to recite the ATCC deposit number in which seed of corn variety I015036 has been deposited would overcome the rejection.

In claims 3: the claim is indefinite because it broadens the scope of parent claim 2. Claim 2 encompasses a population of seed that only consists of seed of corn variety I015036. The population of claim 3, however, encompasses other varieties of corn seed.

In claim 4: the claim indicates that the population of seed of claim 2 is free of hybrid seed. However, the population of seed of claim 2 only consists of variety I015036.

In claim 14: the recitation "An essentially homogeneous population of corn plants produced by growing the seed of inbred corn plant I015036" in lines 1-2 renders the claim indefinite. The I015036 seed can only produce I015036 plants. The population can therefore only consist of I015036 plants. It is then not clear why the population is referred to as "essentially homogeneous," since such populations can be comprised of more than one type of plant.

In claim 16: the recitation "nuclear or cytoplasmic gene" renders the claim indefinite. It is not exactly clear what is referred to "cytoplasmic gene." While plastids comprise genes, the cytoplasm itself does not. It is suggested that the recitation "nuclear or cytoplasmic gene" be replaced with "transgene".

In claim 19: the recitation "wherein the regenerable cells comprise protoplasts or callus" renders the claim indefinite. Callus tissue comprises cells, but cells do not comprise callus. It is suggested that "comprise protoplasts or callus" be replaced with --are in the form of protoplasts or are comprised within callus--.

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In claims 21 and 22: the claims are indefinite because they do not clearly indicate how many crosses are to be performed in the process. It is suggested that that recitation --F1-- be inserted in claim 21, line 1, before "corn seed", and in claim 19, line 1, before "hybrid".

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 3, 14, and 24-31 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims are broadly drawn towards seed of corn variety I015036 as an essentially homogeneous population; an essentially homogeneous population of corn plants produced by growing seed of I015036; any hybrid corn seed produced by crossing corn variety I015036 with any other inbred corn plant; any hybrid corn plant produced by growing said hybrid seed; corn plant I015036 further comprising any single locus conversion; or a method of producing an inbred corn plant derived from I015036, comprising crossing progeny of I015036.

The specification describes numerous morphological and physiological traits of corn plant I015036 (page 24, line 1 to page 29, line 4). The specification also indicates that a hybrid corn plant, designated "8012681" was produced using I05036 as one of the parents (page 55, line 3 to page 59, line 4). The specification also indicates that essentially homogeneous populations of inbred seed are those in which the inbred seed forms about 90% to about 100% of the total

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seed (page 5, lines 15-19). However, in those populations where I015036 seed forms less than 100% of the population, the identity of the remaining seed is unknown, yet the claims encompass all the individuals of the population. The specification does not describe the non-I015036 seed and plants of the claimed essentially homogenous populations. The specification also does not describe any other hybrid corn plant produced by crossing I015036 with any other corn plant. The descriptions of I015036 and 8012681 do not provide any information concerning the description of any other hybrid plant. The description of I015036 is also not indicative of any transgenic I015036 plant or I015036 plants comprising single gene conversion(s). The transgenes may be of any gene, including those that affect more than one trait. The morphological and physiological characteristics of any such plant are not described. A transgene that is a transcription factor, for example, can effect more than just one gene, and multiple traits. Such plants would express different morphological and physiological traits from I015036, which are not described. The claims encompass transgenes or single locus conversions that are not described by the specification or the prior art. It is suggested that claim 27 be amended to list the types of transgenes contemplated in the specification. For example, it is suggested that claim 27 recite the limitations of claim 30. For example, the specification does not describe any gene that confers enhanced yield stability. Given the breadth of the claims encompassing hybrid corn plants expressing any traits and I015036 further comprising any single locus conversion, and lack of guidance of the specification as discussed above, the specification fails to provide an adequate written description of the multitude of corn plants and their parts encompassed by the claims.

5. Claims 1-31 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claims are broadly drawn towards a seed or population of seeds of corn variety I015036; or a corn plant grown from said seed; parts of said plant; a tissue culture comprising cells of said plant; an essentially homogeneous population of corn plants produced by growing said seed; a corn plant capable of expressing all the physiological and morphological traits of I015036; or said plant further comprising a nuclear or cytoplasmic gene conferring male sterility; a tissue culture of regenerable cells of I015036, wherein the regenerable cells are capable of regenerating plants capable of expressing all the physiological and morphological traits of I015036; a process of producing corn seed, comprising crossing I015036 with a second corn plant, or wherein the second parent is a distinct inbred corn plant; hybrid corn seed produced from said process; plant I015036 further comprising any single locus conversion; a method of producing an inbred corn plant derived from I015036, comprising crossing progeny of I015036.

Since the claimed seed of corn line I015036 is essential to the claimed invention, it must be obtainable by a repeatable method set forth in the specification or otherwise be readily available to the public. If the seed is not so obtainable or available, a deposit thereof may satisfy the requirements of 35 U.S.C. 112. The specification does not disclose a repeatable process to obtain the exact same seed in each occurrence and it is not apparent if such a seed is readily available to the public.

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If the seeds are deposited under the terms of the Budapest Treaty, then an affidavit or declaration by the applicants, or a statement by an attorney of record over his or her signature and registration number, stating that the seeds will be irrevocably and without restriction or condition released to the public upon the issuance of a patent would satisfy the deposit requirement made herein. A minimum deposit of 2500 seeds is considered sufficient in the ordinary case to assure availability through the period for which a deposit must be maintained.

If the deposit will not be made under the Budapest Treaty, then in order to certify that the deposit meets the criteria set forth in 37 CFR 1.801-1.809, Applicants may provide assurance of compliance by an affidavit or declaration, or by a statement by an attorney of record over his or her signature and registration number showing that

(a) during the pendency of the application, access to the invention will be afforded to the Commissioner upon request;

(b) all restrictions upon availability to the public will be irrevocably removed upon granting of the patent;

(c) the deposit will be maintained in a public depository for a period of 30 years or 5 years after the last request or for the enforceable life of the patent, whichever is longer;

(d) the viability of the biological material at the time of deposit will be tested (see 37 CFR 1.807); and

(e) the deposit will be replaced if it should ever become inviable.

Claim Rejections - 35 USC § 102 & 103

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5, 7-10, 12-31 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Getschman (U.S. Patent No. 6,043,417).

The claims are broadly drawn towards a seed or population of seeds of corn variety I015036; or a corn plant grown from said seed; parts of said plant; a tissue culture comprising cells of said plant; an essentially homogeneous population of corn plants produced by growing said seed; a corn plant capable of expressing all the physiological and morphological traits of I015036; or said plant further comprising a nuclear or cytoplasmic gene conferring male sterility; a tissue culture of regenerable cells of I015036, wherein the regenerable cells are capable of regenerating plants capable of expressing all the physiological and morphological traits of I015036; a process of producing corn seed, comprising crossing I015036 with a second corn

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plant, or wherein the second parent is a distinct inbred corn plant; hybrid corn seed produced from said process; plant I015036 further comprising any single locus conversion; a method of producing an inbred corn plant derived from I015036, comprising crossing progeny of I015036.

Getschman teaches seed of a maize line designated "79314N1," plants produced by growing said seed, and plants and plant parts having all of the physiological and morphological characteristics of 79314N1 (col. 11, line 1 to col. 13, line 40; claims). It appears that the claimed plants and seeds of the instant invention may be the same as 79314N1, given that they exhibit similar traits, such as a green glume color, a semi-conical ear shape, a buff dry husk color, and a short husk bract (Table 3). Alternatively, if the claimed plants, plant parts, and seeds of I015036 are not identical to 79314N1, then it appears that 79314N1 only differs from the instantly claimed plants, plant parts, and seeds due to minor morphological variation, wherein said minor morphological variation would be expected to occur in different progeny of the same cultivar, and wherein said minor morphological variation would not confer a patentable distinction to I015036. Getschman also teaches essentially homogenous populations of 79314N1 seed, populations of seed 79314N1 essentially free of hybrids, methods to confer male sterility and plant 79314N1 where it is further male sterile; production of tissue culture of regenerable cells from a plant of line 79314N1, wherein regenerable cells are from tissues including flowers, pollen, ovules, among others, or are in the form of protoplasts or are from callus; a plant produced from tissue culture of 79314N1 that is capable of expressing all of the morphological and physiological traits of 79314N1; methods for producing hybrid seeds and plants wherein a plant of inbred line 79314N1 is crossed with another inbred corn plant, and the ensuing seed are harvested, 79314N1 comprising single locus conversions introduced via genetic engineering or

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breeding, or wherein the locus is a dominant or recessive allele, or confers a trait such as bacterial or fungal resistance; hybrid plants produced by crossing 79314N1 with other corn plants; and methods to produce inbred corn plants comprising crossing progeny of plant 79314N1 for several generations (col. 3, line 1 to col. 4, line 48; col. 13, line 43 to col. 16, line 58; col. 17, line 30 to col. 32, line 48; claims). The claimed invention was *prima facie* obvious as a whole to one of ordinary skill in the art at the time it was made, if not anticipated by Getchman.

7. No claim is allowed.

Contact Information

Any inquiry concerning this communication from the examiner should be directed to Ashwin Mehta, whose telephone number is 703-306-4540. The examiner can normally be reached on Mondays-Thursdays and alternate Fridays from 8:00 A.M to 5:30 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached at 703-306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 and 703-872-9306 for regular communications and 703-872-9307 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.



ASHWIN D. MEHTA, PH.D
PATENT EXAMINER

September 16, 2002